

Discovery of a wintering site of Demoiselle Cranes *Anthropoides virgo* in Kafta-Sheraro National Park, Ethiopia

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Découverte d'un site d'hivernage de la Grue demoiselle *Anthropoides virgo* dans le Parc National de Kafta-Sheraro, Éthiopie. Au cours d'une expédition vers le Parc National de Kafta-Sheraro (nord-ouest de l'Éthiopie à la frontière de l'Éritrée) du 26 mars au 16 avril 2009, plus de 21.500 Grues demoiselles *Anthropoides virgo* ont été comptées. Ce chiffre représente environ 9% de la population mondiale. C'est la première fois qu'on observe une telle concentration de Grues demoiselles en Éthiopie/Éritrée, ce qui suggère que la zone de Kafta-Sheraro sert de site d'hivernage pour l'espèce. La vallée de la Tekeze est donc une zone humide d'importance internationale.

Summary. During an expedition to Kafta-Sheraro National Park, in north-west Ethiopia on the border with Eritrea, from 26 March to 16 April 2009, more than 21,500 Demoiselle Cranes *Anthropoides virgo* were recorded, or c.9% of the world population of the species. This constitutes the first evidence of a large concentration of Demoiselle Cranes in Ethiopia/Eritrea, appears to confirm that the Kafta-Sheraro area serves as a wintering site for the species, and identifies this part of the Tekeze Valley as a wetland of international significance.

Kafta-Sheraro, in north-west Ethiopia (13°50'–14°23'N 36°31'–37°29'E; Fig. 1), was recognised as a National Park in 2007 by the Regional Government of Tigray and is an Important Bird Area (EWNHS 1996). It has an estimated area of 5,000 km², with mosaic woodlands of *Combretum–Terminalia*, *Acacia–Commiphora*, dry-evergreen montane, scrubland and riparian vegetation (Mekebebe *et al.* 2001). Within the park the Tekeze River is at an altitude

of c.500 m. In addition to its plant diversity, the park is home to many ungulates, predators and other species of mammals. The presence of African Elephant *Loxodonta africana*, Roan Antelope *Hippotragus equinus*, Greater Kudu *Tragelaphus strepsiceros* and Bohor Reedbuck *Redunca redunca* make the park and its environs a site of special significance. However, the park borders Eritrea and has not been well protected for the last decade as a result of the security situation.

From 26 March to 16 April 2009, an expedition was undertaken to assess the park's faunal diversity and the major threats. The team was composed of experts from the Natural Resources Sector of the Agricultural and Rural Development Bureau of Tigray Region, the Institute of Biodiversity Conservation, and Wildlife for Sustainable

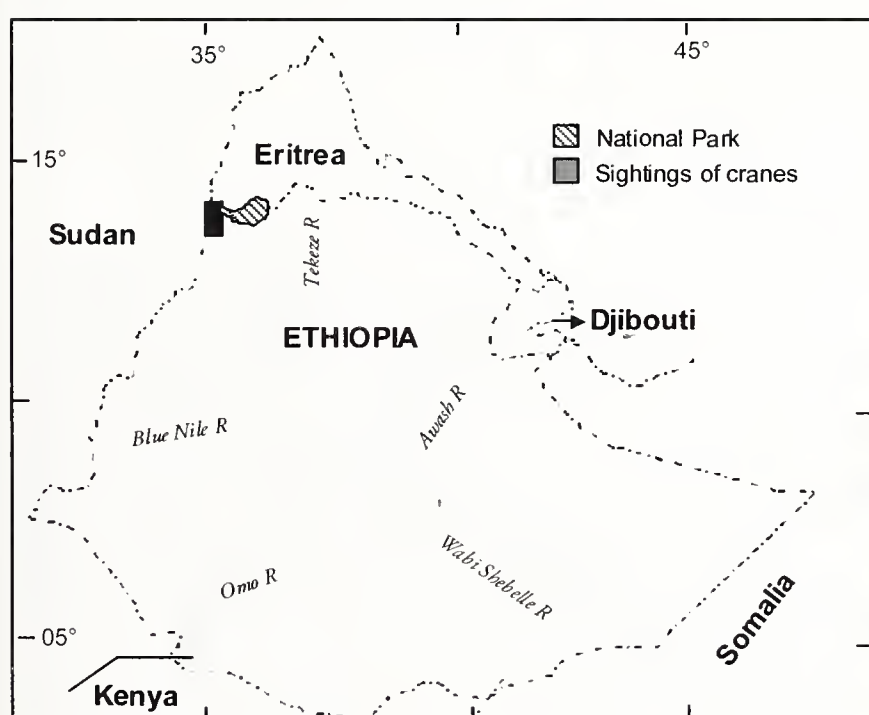


Figure 1. Location of Kafta-Sheraro National Park and sightings of Demoiselle Cranes *Anthropoides virgo* in north-west Ethiopia.

Situation du Parc National de Kafta-Sheraro et des observations de Grues demoiselles *Anthropoides virgo* au nord-ouest de l'Éthiopie.



Figure 2. Demoiselle Cranes *Anthropoides virgo* at their roost on a sandbar in the Tekeze River, Kafta-Sheraro National Park, Ethiopia, March 2009 (Yirmed Demeke)

Grues demoiselles *Anthropoides virgo* dans leur dortoir sur un banc de sable dans la rivière Tekeze, Parc National de Kafta-Sheraro, Éthiopie, mars 2009 (Yirmed Demeke)



Figure 3. Demoiselle Cranes *Anthropoides virgo* leaving their roost in the Tekeze River, Kafta-Sheraro National Park, Ethiopia, March 2009 (Berihun Gebremedhin)

Grues demoiselles *Anthropoides virgo* quittant leur dortoir dans la rivière Tekeze, Parc National de Kafta-Sheraro, Éthiopie, mars 2009 (Berihun Gebremedhin)



Figure 4. Demoiselle Cranes *Anthropoides virgo* flying towards their feeding areas, north-west Ethiopia, March 2009 (Yirmed Demeke)

Grues demoiselles *Anthropoides virgo* volant vers leurs zones de nourrissage, Éthiopie, mars 2009 (Yirmed Demeke)

Development, a local NGO working mainly on elephant conservation in Ethiopia. In addition to five game scouts, members of the Ethiopian Defense Force accompanied the team to ensure its safety.

When, on 5 March 2009 at 06.00 hrs, large numbers of Demoiselle Cranes *Anthropoides virgo* were discovered leaving their apparent roost site in the Tekeze River, it was decided to conduct systematic counts to determine the total number of birds present.

Methods

The cranes were counted from near the bridge over the Tekeze River on three consecutive mornings (5–7 March) between 05.30 and 07.15 hrs as they flew overhead in a south-westerly direction, after leaving their roost on a sandbank in the middle of the Tekeze (Figs. 2–4). Counts were made by BGM on the Ethiopian side and YD on the Eritrean side of the river, using binoculars. T. Atsebeha and B. Meressa assisted with recording.

Results

The largest counts were made on the second and third days when 13,500 and 21,500 birds were counted. A maximum of 60 flocks was recorded with a maximum of 153 individuals in a flock.

Nearly all of the flocks flew off south-west towards the agricultural fields around Humera (Ethiopia), while smaller numbers headed towards Om Hajer (Eritrea) and Hamdayt (Sudan). Only one flock of 30–40 Demoiselle Cranes was found away from the river, feeding in an open area with scattered *Balanites aegyptica* trees, c.5 km from Humera in the direction of Adebay. Other waterbirds seen roosting with the cranes included 113 Sacred Ibises *Threskiornis aethiopicus*, 185 Cattle Egrets *Bubulcus ibis*, and smaller numbers of Black-winged Stilts *Himantopus himantopus* and Little Egrets *Egretta garzetta*.

As early March is the peak of the dry season, the Tekeze River was mostly dry with the remaining water being very shallow. The cranes' main roosting area was on a sandbank north-east of the Tekeze bridge and may well have extended north of this site for c.5 km along the river (Fig. 1). Local informants reported that the cranes usually arrive at Kafta-Sheraro in mid December and depart in April. The cranes are very noisy and because of this are disliked by people dwelling on the outskirts of Humera as the birds vocalise even in the middle of the night.

Discussion

Demoiselle Crane breeds in Ukraine and north-east Turkey to Central Asia and Mongolia, and winters in north-east Africa and south Asia (Cramp & Simmons 1980, Meine & Archibald 1996, Francisco & Tommy 1999). The species formerly also occurred in north-west Africa and perhaps even in southern Spain, as well as Romania, but these populations have been extirpated (Snow & Perrins 1998, Thévenot *et al.* 2003). Demoiselle Cranes on migration have been recorded in the Nile Valley through September (Cramp & Simmons 1980). They cross the Red Sea and winter in Africa, mainly on the Blue and White Niles at c.09°–15°N, in October–February (Johnsgard 1983) (Fig. 5).

Migrants feed mainly on grain, but the species also preys on insects, worms, lizards and other small vertebrates. The birds forage in the morning

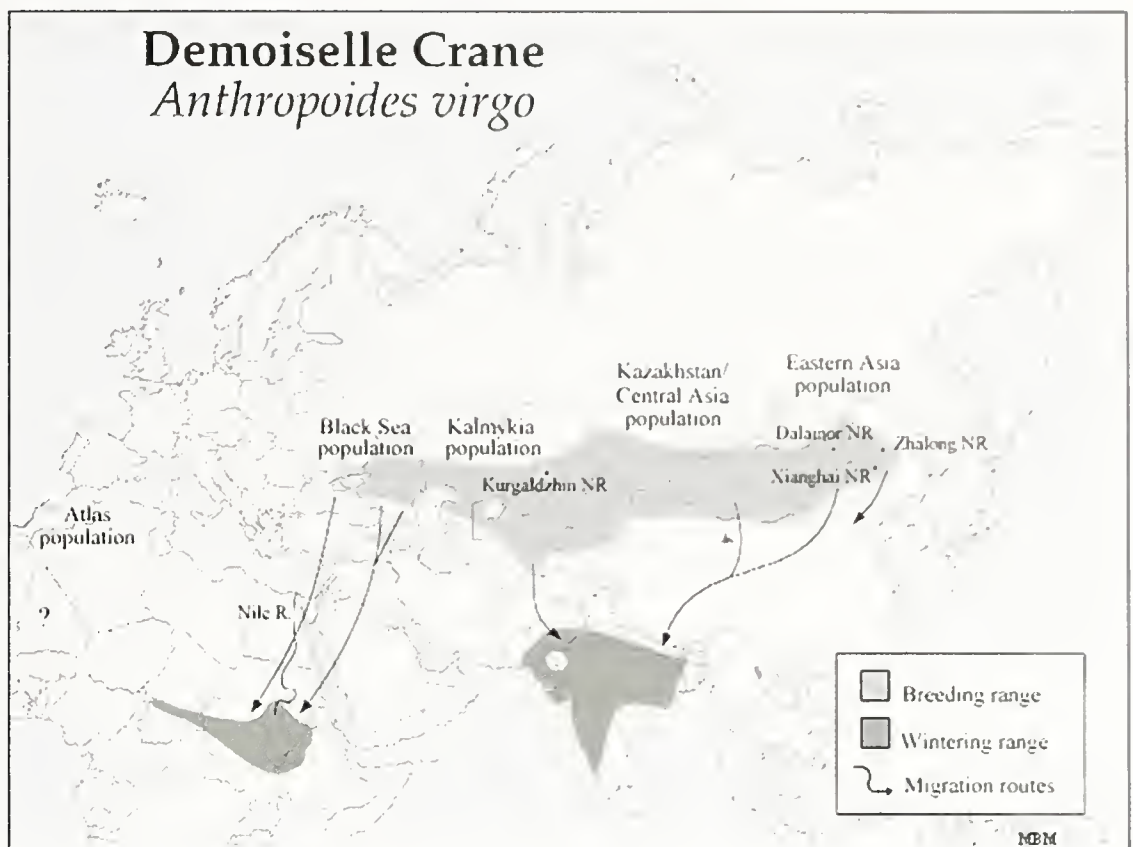


Figure 5. World breeding and wintering ranges, and migration routes, of Demoiselle Crane *Anthropoides virgo* (after Meine & Archibald 1996).

Aires mondiales de reproduction et d'hivernage et routes de migration de la Grue demoiselle *Anthropoides virgo* (d'après Meine & Archibald 1996).



Figure 6. Two adult Demoiselle Cranes *Anthropoides virgo* found dead at their roost site in the Tekeze River, Kafta-Sheraro National Park, Ethiopia, March 2009 (Yirmed Demeke)

Deux Grues demoiselles *Anthropoides virgo* adultes trouvées mortes dans leur dortoir dans la rivière Tekeze, Parc National de Kafta-Sheraro, Éthiopie, mars 2009 (Yirmed Demeke)

and early afternoon, spending the rest of the day and night on open sandbars or at the margins of rivers (Ali & Ripley 1983).

Ash & Atkins (2009) considered Demoiselle Crane to be a rare Palearctic migrant with only three previous definite records in Ethiopia, from Lake Tana, Gallabat and Aseita, with a maximum of just two birds, and two records in Eritrea from Asmara and the Gieffa Plain, with a maximum of

three birds. Nikolaus (1987) describes the species as 'very common on passage in the north [of Sudan] in dry Acacia grassland, often near water. The wintering area is east of the Nile between 14°N [*sic*], but has not been fully detected yet'.

According to the Cranes Status Survey and Conservation Action Plan of IUCN Demoiselle Crane has a world population of 240,000 birds (Meine & Archibald 1996). Based on this figure, our counts of more than 21,500 Demoiselle Cranes comprise 9% of the estimated world population. Criterion 5 of the Ramsar Convention states that a wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds. Our observations and other anecdotal evidence suggest that the Tekeze River in Kafta-Sheraro National Park qualifies as a wetland site of international significance.

Potential threats

The species appears to face a number of threats in the area adjacent to Kafta-Sheraro National Park. These include increased disturbance caused by human activities and direct persecution as a result of the crop damage the birds cause. We also noted a number of stray dogs hunting the cranes. Once a dog was seen struggling with an apparently sick crane in a shallow area of the river and eventually killed it. On another occasion two cranes were found dead in the middle of the roosting site (Fig. 6); the cause or causes of death are unknown.

Irrigated farming is the main activity along the Tekeze River. There are many irrigated plots on both sides of the river, which would definitely impact the cranes as any movement of people especially during late afternoon or early morning around their roosting sites is liable to cause disturbance. Local informants told us that, previously, the roost site in the Tekeze River was frequented by people fetching water for household consumption and bringing their cattle, sheep, goats and camels to drink. We were told that this practice continues but is less frequent than in the past, presumably due to the security situation. Indeed, it is possible that the security situation, which limits human activity in the area could be a factor protecting the species.

Further annual monitoring is recommended to determine whether the species regularly visits the site in large numbers and whether it does indeed overwinter there. In addition, studies should be

initiated to investigate its ecology, biology, habitat preferences and major threats.

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